MCF 3M

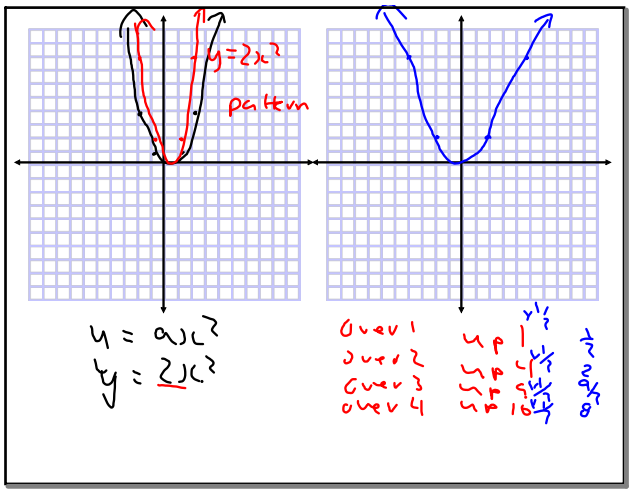
Chapter 4 Test Review **Test** Tues. April 5th

Expansion
Factoring
Identifying the 2 Zeros/Roots
Finding Vertex Form - Completing the Square
Finding Standard Form
Quadratic Formula

WORD PROBLEMS

p 226 q. 1,2,3,4 & 5
p254-255 q 1-10

Mar 10-8:12 AM



Mar 11-10:12 AM

Complete The Square

$f(x) = -4x^2 - 8x + 12$

$f(x) = -4(x^2 + 2x) + 12$ partial factor

$f(x) = -4(x^2 + 2x + 1 - 1) + 12$ $\left(\frac{b}{2}\right)^2$

$f(x) = -4[(x+1)^2 - 1] + 12$

$f(x) = -4(x+1)^2 + 4 + 12$

$f(x) = -4(x+1)^2 + 16$ [-1, 16]

Mar 11-9:43 AM

$f(x) = x^2 + 2x - 35$ factored zeros

$f(x) = x^2 + 7x - 5x - 35$

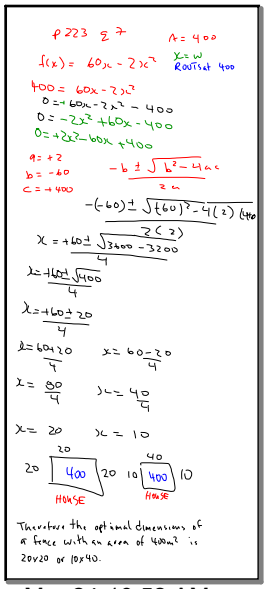
$f(x) = x(x+7) - 5(x+7)$

$= (x+7)(x-5)$

$s = -7$ $t = +5$

A	M
+2	-35
	x
	5 +7

Mar 11-10:07 AM


p 223 # 7 A = 400

f(x) = 60x - 2x² x = w Restrict 400

400 = 60x - 2x²

0 = -2x² + 60x - 400

0 = 2x² - 60x + 400

a = +2 b = -60 c = +400

$x = \frac{-b \pm \sqrt{b^2-4ac}}{2a}$

$x = \frac{-(-60) \pm \sqrt{(60)^2 - 4(2)(400}}{2(2)}$

$x = \frac{+60 \pm \sqrt{3600 - 3200}}{4}$

$x = \frac{+60 \pm \sqrt{400}}{4}$

$x = \frac{+60 \pm 20}{4}$

$x = \frac{60+20}{4}$ $x = \frac{60-20}{4}$

$x = \frac{80}{4}$ $x = \frac{40}{4}$

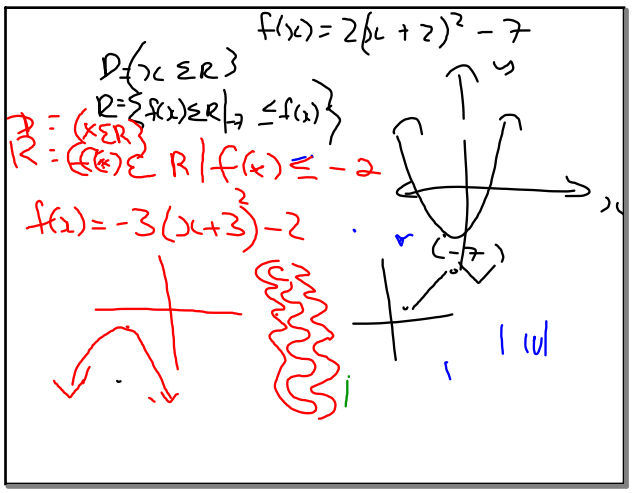
x = 20 x = 10

20 | 400 | 20 HOUSE

10 | 400 | 40 HOUSE

Therefore the optimal dimensions of a fence with an area of 400m² is 20x20 or 10x40.

Mar 24-10:52 AM



Mar 24-10:57 AM

#7

Sally

t = s

$h(t)$ = m

$h(t) = -5t^2 + 10t$

$h(t) = -5(t^2 - 2t)$

$h(t) = -5(t^2 - 2t + 1 - 1)$

$h(t) = -5[(t-1)^2 - 1]$

$h(t) = -5(t-1)^2 + 5$

(1, 5)

Dangerous Ball

1 m

The ball reaches a maximum height of 5m at 1 sec. Therefore it is a dangerous ball.

Nov 2-9:39 AM

p 120-121 q. 11, 12, 15,16& 18

p184 q. 1-10

Nov 2-8:39 AM